

Method of blasting multiple layers or levels of rock

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A method of blasting plural layers of material (3 8, 40, 42, 44) in a blastfield (16) that reduces the amount of mechanical excavation required to expose a lower layer of material. The method includes using rows of equally spaced blastholes (18, 20, 22, 24) that pass through all of the layers and additional intermediate rows of blastholes (26, 28) that pass down only through top layer (40). Each blasthole is capped d with stemming material and includes one or more decks of explosives material (46) and detonators (48), with air decks or inert stemming (45) separating adjacent explosives decks (46). The detonators in layer (40) are detonated first in order from row (18) rearwards to throw a substantial amount of the blast material from layer (40) forwardly of free face (12) onto floor (34). In the same blasting cycle and within seconds of the throw blast, explosives material in layers (42, 44) is detonated in a stand-up blast in which material in layers (38, 42, 44) is broken up but otherwise minimally displaced or thrown forwardly. Layers (38, 44) may be coal seams which are separated by interburden layer (42) and covered by overburden layer (40).

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